

## Almond PMA II Work Plan

Community Alliance with Family Farmers

Amount Funded: \$217,860

### Overview

The Almond Pest Management Alliance II (Almond PMA II) will continue the positive outcomes of the Almond Pest Management Alliance I (Almond PMA I, 1998–2005). DPR funded the Almond PMA I for five consecutive years to evaluate reduced risk pesticide inputs in California almonds. The Almond Board continued to fund Almond PMA I for its demonstrated success with reducing pesticide inputs in California almonds. The analysis of Pesticide Use Report (PUR) data and a subsequent report by DPR stated that almond growers reduced dormant spray applications by 77% from 1991 to 2000, primarily attributed to the efforts of Almond PMA I. Almond PMA I promoted intensive monitoring protocols and tracked pest populations, damage levels, and economic data over successive years. This consistency demonstrated the long-term economic success of reduced-risk practices.

Since Almond PMA I, pesticide use on almond acreage has increased. The almond industry, California's top horticultural export with a farm gate value of over \$2 billion, encompasses over 755,000 acres in California's Central Valley and has grown steadily for 15 years. New almond growers need education, experienced growers need reminders and growers' (PCAs) continue to make many of the pest control decisions in almonds. Project efforts to change pest management practices will target both growers and Pest Control Advisors (PCA). In addition, new issues such as reducing VOC emissions from pesticides as well as increased concern about run-of/spray drift into waterways require new outreach efforts. With effective education and demonstration, growers and PCAs can manage almond pests by first considering environmentally friendly, lower toxicity materials.

### Goals and Objectives

Almond PMA II will specifically reduce the use of organophosphates (OPs), carbamates, and pyrethroids in almonds. Almond PMA II will demonstrate the IPM program in the "Seasonal Guide to Environmentally Responsible Pest Management Practices in Almonds" developed during Almond PMA I.

### Work Plan

#### Objective 1. Update and analyze current data

- Task 1.0: Hold initial meeting with Alliance Management Team members and Alliance partners to get direction and ideas for data analysis. Deliverable: plan to guide PUR data analysis. Meeting notes.
- Task 1.1: Analyze PUR data from past five years looking at regional trends in use of pesticides of human health and environmental concern. This compendium will include previous studies (including results from Almond PMA I) and an analysis of current pesticide use trends discussing historical use; areas of highest use; use of products with greatest impacts to human health, air and water; current use of reduced-risk materials;

and analyses of variable use patterns (i.e. weather-related, new pests or high pest pressure trends). Data will be compiled from the DPR Pesticide Use Reports, UC IPM, and the Almond Board. Deliverables: compendium report analyzing almond pesticide use and trends over time.

- Task 1.3: Identify potential target regions to focus outreach and promotion of reduced-risk materials and practices to growers and PCAs. Deliverables: list of potential target areas and matrix detailing reasons to target them.
- Task 1.4: Identify target chemical active ingredients, pest problems that instigate use of those active ingredients and IPM alternatives available to reduce use of those particular active ingredients. Deliverables: matrix of active ingredients, associated pest problems and alternative practices specific to target regions.
- Task 1.5: Solicit input from Alliance Management Team to select three project sites in targeted geographic areas and to identify growers willing to participate. Deliverables: definition of three target regions for project demonstration sites and list of potential growers to approach for demonstration sites.
- Task 1.6: Select three growers to host project demonstration sites. Deliverables: commitment from three growers in target regions to use a section of their orchard as a demonstration site for the duration of the project.
- Task 1.7: Identify PCAs in each of the three regions willing to participate in project and provide leadership in PCA outreach and education efforts. Deliverables: commitments from three PCAs to participate for the duration of the project.
- Task 1.8: Create a site plan and define project monitoring and treatment thresholds for each of the three demonstration sites and have Alliance Management Team and Alliance Partners review. Deliverables: site plan for three demonstrations sites approved by growers and Alliance Management Team and Alliance Partners.
- Task 1.9: Create project mailing and outreach lists including almond growers, almond industry representatives and almond PCAs. Deliverables: comprehensive mailing list of relevant members of the almond industry.

#### Objective 2. Outreach and education expanding upon the success of Almond PMA I

- Task 2.0: Develop a specific outreach and education plan with target dates and target audience for each activity. Deliverables: outreach and education plan.
- Task 2.1: Develop technical support and promotional materials with target practices based on the Guide to Environmentally Responsible Pest Management Practices in Almonds, updating any new information and focusing on needs of our target regions. Deliverables: educational materials for growers and PCAs.
- Task 2.2: Host two field days a year at each of the three regions. Partners will host spring and fall field days in each of the three demonstration orchards. Deliverables: field day flyers, sign in sheets and evaluations from field days.
- Task 2.3: Coordinate dissemination of information to project partners and target audience including information to be used in partners' newsletters and websites to promote reduced risk practices and provide information on project activities (Almond Board of California, CAFF, UC IPM, UC Extension). Deliverables: copies of all materials promoting project or practices from project partners.
- Task 2.4: Produce and distribute two editions per year of an Almond PMA newsletter. Deliverables: copies of all newsletters.

- Task 2.5: Actively promote and provide information to growers and PCAs on reduced risk practices in ag media, conferences and meetings held by non-project partners. Deliverables: programs from events where Almond PMA II principles and practices were promoted and media coverage of the project from non-project partners.

### Objective 3. Educate Pest Control Advisors (PCAs) in sustainable farming practices

- Task 3.0: Interview a sample of almond PCAs statewide to understand IPM awareness and barriers to implementing reduced risk practices and determine PCAs needs for reduced risk training. Deliverables: Document detailing level of understanding and use of IPM strategies among almond PCAs along with barriers to implementation and outreach plan designed to overcome those barriers.
- Task 3.1: Directly involve local PCAs in the planning and set up of the demonstration orchards, ensuring their leadership during implementation. Deliverables: PCAs involved in the project as leaders with direct experience in IPM implementation.
- Task 3.2: PCA project leaders conduct weekly orchard monitoring at demonstration sites. CAFF compile monitoring results for the three sites. Deliverables: monitoring results for the three sites.
- Task 3.3: Make presentations at PCA association and trade meetings. We will craft and deliver presentations for PCA trainings, conferences and meetings (including both California Association of Pest Control Advisors (CAPCA) and the Association of Applied IPM Ecologists (AAIE). Through direct survey evaluation of our mentoring and education efforts, we will ensure the information presented is both timely and relevant. Deliverables: list of meetings attended.
- Task 3.4: Provide PCA mentoring through field days, one on one meetings and educational materials promoting IPM. Link PCAs with regional resources (UCCE, ABC and others). Deliverables: field day sign-in sheets, meeting notes and materials provided.
- Task 3.5: Targeted on-line PCA trainings with UC IPM teaching biology, host/pest interactions, monitoring, and treatment decisions, including the value of reduced risk, selective insecticides. Deliverables: Training flyers, sign-in, materials covered, evaluations.

### Objective 4. Partner with Suppliers

- Task 4.0: Use analysis of PUR trends (with DPR staff) and consult with UC IPM specialists to identify opportunity areas to focus efforts. Identify target companies and prepare outreach plan. Deliverables: plan, target companies.
- Task 4.3: Include chemical company suppliers in field days and other outreach activities. Deliverables: narrative and analysis of relationships developed and impact of outreach efforts.

### Objective 5. Project Administration and Reporting

- Task 5.0 Oversee all project implementation including timeline, tasks, and create and submit monthly and final reports and invoices. Deliverables: timely implementation of all tasks.
- Task 5.1 Hold Alliance Management Team meetings and Alliance Partner meetings two times per year to ensure focus and direction. Deliverables: Meeting notes from all meetings.

- Task 5.2 Evaluate success of project through analysis of data from demonstration sites, PUR data and evaluations from field days and PCA trainings. Deliverables: Project evaluation in reporting.